

Name: _____ Date: _____

CHAPTER 5 PRACTICE TEST – LINEAR EQUATIONS

Some Helpful Formulas (These will not be on the test)

Slope Intercept: $y = mx + b$

Point Slope: $y - y_1 = m(x - x_1)$

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

Standard Form: $Ax + By = C$

PART 1: FINDING X- and Y-INTERCEPTS. Find the x and y intercepts: SHOW YOUR WORK and remember to write your answer as a point (3 pts. each).

1. $3y = 12 - x$

2. $3y + 6 = 4x + 12$

x-int: _____ y-int: _____ x-int: _____ y-int: _____

PART 2: SHORT ANSWER. Answer the following question using complete sentences (2 pts.).

3. Explain how to graph the line $y = 5$.

PART 3: SLOPE OF A LINE. Circle the correct description of the line with the given slope (2 pts. each).

4. Slope = $-\frac{2}{3}$

Rises left to right

Falls left to right

Horizontal line

Vertical line

5. Slope = 0

Rises left to right

Falls left to right

Horizontal line

Vertical line

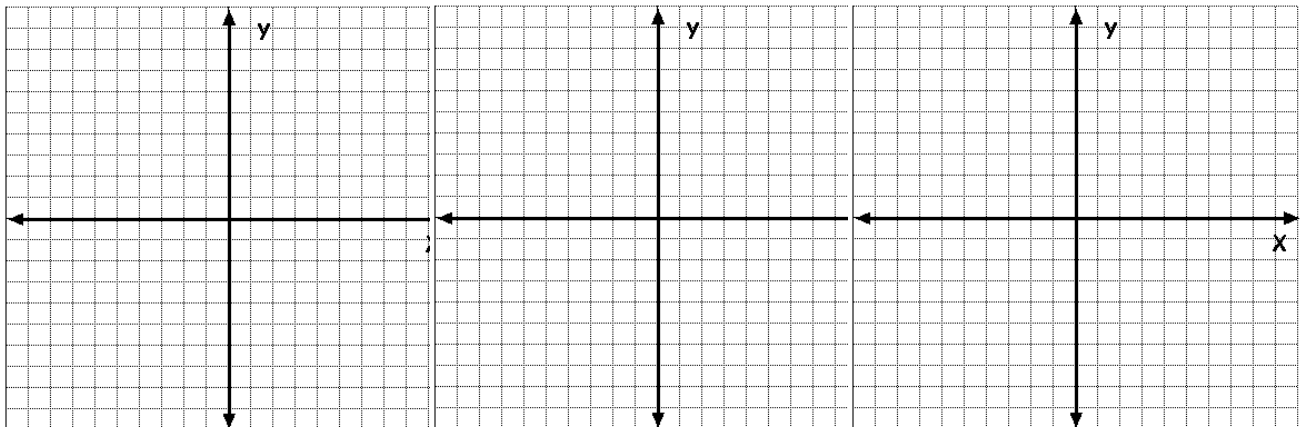
PART 4: SLOPE-INTERCEPT FORM. Rewrite each equation in slope-intercept form, identify the slope and y-intercept (write as a point), and graph the following equations (5 pts. each).

6. $y = \frac{4}{3}x - 5$

7. $x = -4$

8. $5x + 2y - 8 = x + 2$

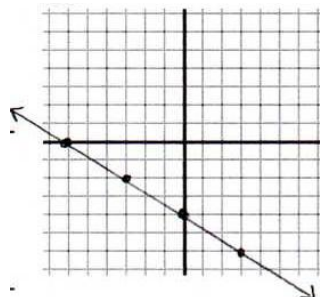
slope = _____ y-int. = _____ slope = _____ y-int = _____ slope = _____ y-int. = _____



PART 5: WRITING THE EQUATION OF A LINE. Write the equation of the line given the following information. (4 pts. each).

9. slope = $\frac{1}{2}$
y-intercept = (0, 3)

10.



PART 6: MORE WRITING THE EQUATION OF A LINE. Write the equation, in slope-intercept form, of the line that passes through the two given points. SHOW YOUR WORK. CIRCLE your final answer. (5 pts.)

11. (-3, 8) and (-4, 6).

12. (2,1) and (-1, 2)

PART 7: WRITING THE EQUATION OF PARALLEL AND PERPENDICULAR LINES.

Write the equation, in slope-intercept form, of the line that fits the following description. Please CIRCLE your final equation. SHOW ALL WORK (4 pts. each).

13. Write the equation of the line parallel to $2x + 4y = 1$ that goes through (4, -4).

14. Write the equation of the line that is perpendicular to $y = \frac{2}{3}x + 1$ that goes through (6, 4).

PART 8: PARALLEL AND PERPENDICULAR LINES. Rewrite each equation so that you can easily determine the slope of each line. Write the slope of each line in the space provided; then determine if the lines are parallel, perpendicular, or neither. State your reason. (4 pts. each).

15. Line #1: $y = 4x - 3$

Line #2: $y = \frac{1}{4}x + 1$

Slope of Line #1: _____

Slope of Line #2: _____

Parallel Perpendicular Neither

Reason:

16. Line #1: $5y = 20x + 15$

Line #2: $y = 4x + 1$

Slope of Line #1: _____

Slope of Line #2: _____

Parallel Perpendicular Neither

Reason:

17. Line #1: $-6x + y = -5$

Line #2: $y = -\frac{1}{6}x - 1$

Slope of Line #1: _____

Slope of Line #2: _____

Parallel Perpendicular Neither

Reason:

18. Line #1: $y = 5$ Line #2: $x = 8$

Slope of Line #1: _____

Slope of Line #2: _____

Parallel Perpendicular Neither

Reason:

PART 9: DEFINITIONS – Define each of the following.

19. Slope-

20. What does each variable in the slope intercept formula represent?

21. Undefined Slope-

22. Perpendicular Slopes-

23. Parallel Slopes-

24. Explain what all the variables in the point-slope formula represent?